**WHAT IS CLAIMED IS:**

1.      A method for assessing conditions, comprising the steps of:

collecting real-time condition data indicative of conditions from at least one

5      sensor at a particular location;

collecting real-time position data indicative of the location of the sensor;

repeating the steps of collecting the real-time condition data and the real-time position data over time at one or more locations; and

correlating the collected real-time condition data with the collected real-time

10      position data to produce correlated data indicative of conditions at the one or more

locations over time.


2.      The method of claim 1, wherein the data collected from the sensor is data indicative of internal conditions of a user or object.

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3.      The method of claim 1, wherein the data collected from the sensor is data indicative of environmental conditions.


4.      The method of claim 1, wherein the data collected from the sensor is data

20      indicative of exposure.


5.      The method of claim 1, further comprising mapping sensor data at the one or more locations over time based on the correlated data.


25   6.      The method of claim 1, further comprising determining, based on the sensor data, risks of hazardous conditions associated with the one or more locations over time.


7.      The method of claim 1, further comprising activating an alarm when the sensor data approaches a hazardous condition threshold.

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8. The method of claim 1, further comprising analyzing the correlated data to determine conditions at the one or more locations over time.

5 9. The method of claim 8, wherein the step of analyzing includes selecting at least a portion of the collected data for analysis.

10. The method of claim 9, wherein the step of selecting selects data within at least one of the following: a particular range of sensed levels, a particular range of locations, 10 a particular time period, and a particular range of accuracy of the position data.

11. The method of claim 8, wherein the step of analyzing including producing data indicative of the accuracy of the collected position data.

15 12. The method of claim 8, wherein the step of analyzing is performed using statistical analysis software or geographical information system software.

13. The method of claim 8, wherein the step of analyzing includes generating at least one of: descriptive statistics of sensor distributions, descriptive statistics of log- 20 transformed sensor distributions, depictions of sensor frequency distributions, depictions of sensor values over time, depictions of sensor values at various locations, and depictions of locations where data were collected.

14. The method of claim 13, wherein the step of analyzing further includes 25 producing a summary of generated data in the form of at least one of: a spreadsheet, a word processor file, and an internet web page.

15.    The method of claim 10, wherein the condition data is collected from a plurality of co-located sensors, and the step of selecting selects data collected by one or more of the sensors for analysis.

5    16.    The method of claim 1, wherein the real-time position data is global positioning system (GPS) data.

17.    The method of claim 1, further comprising correcting the position data.

10    18.    The method of claim 17, wherein the step of correcting the position data is performed in real time with differential global positioning system (DGPS) data received using telemetry or with data received using a wide area augmentation system (WAAS).

15    19.    The method of claim 1, further comprising logging the correlated data to a memory.

20.    The method of claim 1, further comprising transmitting the correlated data in real time using telemetry.

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21.    The method of claim 1, wherein the sensor is portable, and the steps of collecting real-time condition data and real-time position data are performed at various locations over time.

25    22.    An apparatus for generating data indicative of conditions, comprising:

at least one sensor for collecting real-time condition data indicative of conditions at a particular location;

a receiver for collecting real-time position data indicative of the location of the sensor, wherein the real-time condition data and the real-time position data are collected at one or more locations over time;

a correlator for correlating the collected real-time condition data with the
5      collected real-time position data to produce correlated data indicative of conditions at the one or more locations over time.

23.      The apparatus of claim 22, wherein the data collected from the sensor is data indicative of internal conditions of a user or object.
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24.      The apparatus of claim 22, wherein the data collected from the sensor is data indicative of environmental conditions.

25.      The apparatus of claim 22, wherein the data collected from the sensor is data
15      indicative of exposure.

26.      The apparatus of claim 22, wherein an alarm is activated when the sensor data approaches a hazardous condition threshold.

20    27.      The apparatus of claim 22, wherein the receiver receives global positioning system (GPS) data.

28.      The apparatus of claim 22, further comprising means for correcting the position data.
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29.      The apparatus of claim 28, wherein the position correcting means includes a telemetry receiver that receives differential global positioning system (DGPS) data or means for receiving correction data using a wide area augmentation system (WAAS).for correcting the position data in real time.
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30.　The apparatus of claim 22, further comprising a memory for logging the correlated data.

5　31.　The apparatus of claim 22, further comprising a telemetry transmitter for transmitting the correlated data in real time.

32.　The apparatus of claim 22, wherein the apparatus is portable, and the real-time condition data and the real–time position data are collected at various locations over

10　time.

33.　The apparatus of claim 22, further comprising a rechargeable battery.

34.　The apparatus of claim 22, wherein the apparatus is wearable.

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35.　An apparatus for analyzing data indicative of conditions, comprising:

a receiver for receiving data including real-time condition data indicative of conditions collected from at least one sensor at a particular location correlated with real-time position data indicative of the location of the sensor, wherein the condition

20　data and the position data are collected at one or more locations over time; and

a processor for analyzing the received data to determine conditions at the one or more locations over time.

36.　The apparatus of claim 35, wherein the data collected from the sensor is data

25　indicative of internal conditions of a user or object.

37.　The apparatus of claim 35, wherein the data collected from the sensor is data indicative of environmental conditions.

38.     The apparatus of claim 35, wherein the data collected from the sensor is data indicative of exposure.

39.     The apparatus of claim 35, wherein the processor maps a sensor level at the one or more locations over time based on the correlated data.

40.     The apparatus of claim 35, wherein the processor determines, based on the sensor data, risks of hazardous conditions at the one or more locations over time.

41.     The apparatus of claim 35, wherein an alarm is activated when the sensor data approaches a hazardous conditions threshold.

42.     The apparatus of claim 35, further comprising a selector for selecting at least a portion of the received data for analysis.

43.     The apparatus of claim 42, wherein the selector selects data within at least one of the following:  a particular range of sensed levels, a particular range of locations, a particular time period, and a particular range of accuracy of the position data.

44.     The apparatus of claim 35, wherein the processor produces data indicative of the accuracy of the collected position data.

45.     The apparatus of claim 35, wherein the processor analyses the received data using statistical analysis software or geographical information system software.

46.     The apparatus of claim 35, wherein the processor generates at least one of: descriptive statistics of sensor distributions, descriptive statistics of log-transformed sensor distributions, depictions of sensor frequency distributions, depictions of sensor

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values over time, depictions of sensor values at various locations, depictions of locations where data were collected.

47. The apparatus of claim 46, wherein the step of analyzing further includes producing a summary of generated data in the form of at least one of: spreadsheets, a word processor file, and an internet web page.

48. The apparatus of claim 42, wherein the condition data is collected from a plurality of co-located sensors, and the selector selects condition data collected from one or more sensors for analysis.

49. A method for assessing conditions, comprising the steps of:
    collecting real-time condition data indicative of conditions from a plurality of sensors at one or more times, wherein at least two of the sensors are at different locations; and
    time-synchronizing the real-time condition data collected from the plurality of sensors to produce data indicative of conditions at the different locations at one or more times.

50. The method of claim 49, wherein the data collected from the sensors is data indicative of internal conditions of users or objects at the different locations.

51. The method of claim 49, wherein the data collected from the sensors is data indicative of environmental conditions at the different locations.

52. The method of claim 49, wherein the data collected from the sensors is data indicative of exposure at the different locations.

53.     The method of claim 49, further comprising mapping conditions at the different locations over time.

54.     The method of claim 49, further comprising determining risks of hazardous

5   conditions at the different locations at one or more times.

55.     The method of claim 49, further comprising activating an alarm when the sensor data approaches a hazardous conditions threshold.

10  56.     The method of claim 49, further comprising:

collecting real-time position data indicative of the locations of the sensors; and

correlating the collected real-time condition data with the collected real-time

position data to produce correlated data indicative of conditions at the different

locations at one or more times.

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57.     The method of claim 49, further comprising analyzing the data indicative of conditions to determine conditions at the different locations at one or more times.

58.     The method of claim 57, wherein the step of analyzing includes selecting at

20  least a portion of the data for analysis.

59.     The method of claim 58, wherein the step of selecting selects data within at least one of the following:  a particular range of sensed levels, a particular range of locations, a particular range of accuracy of the position data, and a particular time

25  period.

60.     The method of claim 57, wherein the step of analyzing including producing data indicative of the accuracy of the collected position data.

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61.    The method of claim 57, wherein the step of analyzing is performed using statistical analysis software or geographical information system software.

62.    The method of claim 57, wherein the step of analyzing includes generating at least one of: descriptive statistics of sensor distributions, descriptive statistics of log-transformed sensor distributions, depictions of sensor frequency distributions, depictions of sensor values over time, depictions of sensor values at various locations, depictions of locations where data were collected.

63.    The method of claim 62, wherein the step of analyzing further includes producing a summary of generated data in the form of at least one of: spreadsheets, a word processor file, and an internet web page.

64.    The method of claim 58, wherein the step of selecting includes selecting data collected from one or more of the sensors for analysis.

65.    The method of claim 49, wherein the real-time position data is global positioning system (GPS) data.

66.    The method of claim 49, further comprising correcting the position data.

67.    The method of claim 66, wherein the step of correcting the position data is performed in real time with differential global positioning system (DGPS) data received using telemetry or with data received using a wide area augmentation system (WAAS).

68.    The method of claim 49, further comprising logging the correlated data to a memory.

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69.   The method of claim 49, further comprising transmitting the correlated data in real time using telemetry.

70.   A system for assessing conditions, comprising:

5   a plurality of sensors for collecting real-time condition data indicative of conditions at one or more times, wherein at least two of the sensors are located at different locations; and

a synchronizer for time-synchronizing the real-time condition data collected from the plurality of sensors to produce data indicative of conditions at the different

10   locations at one or more times.

71.   The system of claim 70, wherein the data collected from the sensors is data indicative of internal conditions of users or objects at the different locations.

15   72.   The system of claim 70, wherein the data collected from the sensors is data indicative of environmental conditions at the different locations.

73.   The system of claim 70, wherein the data collected from the sensors is data indicative of exposure at the different locations.

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74.   The system of claim 70, further comprising a processor for mapping conditions at the different locations over time.

75.   The system of claim 70, further comprising means for determining risks of

25   hazardous conditions at the different locations at one or more times.

76.   The system of claim 70, wherein an alarm is activated when the sensor data approaches a hazardous conditions threshold.

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77.     The system of claim 70, further comprising:

a receiver for collecting real-time data position indicative of the different locations of the sensors at one or more times; and

a correlator for correlating the collected real-time condition data with the
5     collected real-time position data to produce correlated data indicative of conditions at the different locations at one or more times.

78.     The system of claim 70, further comprising an analyzer for analyzing the data indicative of conditions to determine conditions at the different at one or more times.
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79.     The system of claim 78, wherein the analyzer selects a portion of the data for analysis.

80.     The system of claim 79, wherein the analyzer selects data within at least one of
15     the following: a particular range of sensed levels, a particular range of locations, a particular time period, and a particular range of accuracy of the position data.

81.     The system of claim 78, wherein the analyzer produces data indicative of the accuracy of the collected position data.
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82.     The system of claim 78, wherein the analyzer includes statistical analysis software or geographical information system software for analyzing the data.

83.     The system of claim 78, wherein the analyzer generates at least one of:
25     descriptive statistics of sensor distributions, descriptive statistics of log-transformed sensor distributions, depictions of sensor frequency distributions, depictions of sensor values over time, depictions of sensor values at various locations, depictions of locations where data were collected.

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84.     The system of claim 83, wherein the analyzer produces a summary of generated data in the form of at least one of: a spreadsheet, a word processor file, and an internet web page.

5       85.     The system of claim 78, wherein the analyzer selects at least a portion of the data collected from one or more of the sensors for analysis.

86.     The system of claim 70, wherein the real-time position data is global positioning system (GPS) data.

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87.     The system of claim 70, further comprising correcting means for correcting the collected position data.

88.     The system of claim 87, wherein the correcting means corrects the position data

15      in real time with differential global positioning system (DGPS) data received using telemetry or with data received using a wide area augmentation system (WAAS).

89.     The system of claim 70, further comprising a memory for logging the correlated data.

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90.     The system of claim 70, further comprising a transmitter for transmitting the correlated data in real time using telemetry.